SN 09/522,510   **PATENT**

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	Youfeng Wu	Examiner: William H. Wood
Serial No.:	09/522,510	Group Art Unit: 2193
Filed:	March 10, 2000	Docket No.: 884.258US1
Title:	SOFTWARE SET-VALUE PROFILING AND CODE REUSE	
Assignee:	Intel Corporation	Customer Number: 21186

PRE-APPEAL BRIEF REQUEST FOR REVIEW

Mail Stop AF
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Applicant respectfully requests review of the final rejection in the above-identified application. No amendments are submitted with this request.

This request is being filed with a Notice of Appeal.

The review is requested because of the §102 rejections of claims 16, 17, 20-22, 36 and 42 and §103 rejections of claims 3, 6, 7, 9, 11-15, 18, 19, 23-29, 37, 39-41, and 43-46.

Applicant submits that the Examiner has not properly established *prima facie* rejections under 35 USC §102 and §103. In particular, the cited references do not teach or suggest all the claim features of each rejected claim. The discussion below addresses this.

CLAIMS 16, 17, 20-22, 36 AND 42 WERE REJECTED UNDER 35 USC § 102(A) OVER CALDER.
Discussion of Claims 16 and 42

Applicant submits that the claimed "instrumenting the software program to, when executed, sample a location-value every S occurrences of the candidate load instruction, wherein S is an integer greater than 1" is not taught or suggested by Calder. For a more detailed discussion of this, see Applicant's Amendment and Response mailed July 11, 2005 at Page 11.

Discussion of Claims 17, 20-22, and 36

Claims 17, 20-22, and 36 each depend, directly or indirectly, on claim 16. For at least the reasons noted above, Applicant respectfully submits that Calder does not teach or suggest each and every element of claims 17, 20-22, and 36.

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CLAIMS 3, 7, 9, 11, 12, 14, 15, 23, 26, 27, 29, 37, AND 39 WERE REJECTED UNDER 35 USC § 103(A) OVER CONNORS AND FELLER.

Discussion of Claims 3 and 9

Applicant submits that the claimed "tracking, during the execution, a number of times a set-value is encountered" and "selecting, based on the tracking, the candidate reuse region as a computation reuse region" is not taught or suggested by the combination of Connors and Feller. For a more detailed discussion of this, see Applicant's Amendment and Response mailed July 11, 2005 at Pages 12 and 13.

Discussion of Claim 11

Applicant submits that the claimed "combining the register values into a single set-value; determining an occurrence frequency of the single set-value; and storing the occurrence frequency and the single set-value in a data structure" is not taught or suggested by the combination of Connors and Feller. For a more detailed discussion of this, see Applicant's Amendment and Response mailed July 11, 2005 at Page 13.

Discussion of Claims 7, 12, 14, and 15

Each of claims 7, 12, 14, and 15 depend, directly or indirectly, on one of claims 3, 9, or 11. For at least the reasons noted in the discussions of claims 3, 9, and 11, Applicant submits that the combination of Connors and Feller does not teach or suggest each and every element of claims 7, 12, 14, and 15. Additionally, there is some confusion in the Office Action mailed October 6, 2005 as to whether claims 14 and 15 were rejected as being unpatentable over Connors in view of Feller, or whether they were rejected as being unpatentable over Connors in view of Feller and Keller. In the latter case, Applicant submits that Keller also does not teach or suggest the features cited in the discussions of claims 3, 9, and 11.

Discussion of Claims 23, 27, and 39

Applicant submits that claim 23's "periodically sampling set-values for ones of the candidate reuse regions to produce a probability of occurrence of top set-values, wherein each of the set-values includes values of input registers for one of the candidate reuse regions; and basing the selection of the reuse regions on the probability of occurrence of the top set-values" and claims 27 and 39's using an "occurrence frequency" for selecting computation reuse regions are

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not taught or suggested by the combination of Connors and Feller. For a more detailed discussion of this, see Applicant's Amendment and Response mailed July 11, 2005 at Page 17.

Discussion of Claims 26 and 29

Each of claims 26 and 29 depend, directly or indirectly, on one of claims 23 or 27. For at least the reasons noted in the discussion of claims 27 and 29, Applicant submits that the combination of Connors and Feller does not teach or suggest each and every element of claims 26 and 29.

Discussion of Claim 37

Claim 37 depends on claim 9. For at least the reasons noted in the discussion of claim 9, Applicant submits that the combination of Connors and Feller does not teach or suggest each and every element of claims 26 and 29.

CLAIMS 6, 24, 25, 28, 40, 43, 44 AND 46 WERE REJECTED UNDER 35 USC § 103(A) OVER CONNORS IN VIEW OF FELLER AND KELLER.

Discussion of Claim 6

Claim 6 depends on claim 3. For at least the reasons noted in the discussion of claim 3, Applicant respectfully submits that the combination of Connors and Feller does not teach or suggest each and every element of claim 6. Additionally, Applicant submits that Keller does not teach or suggest the cited features that Connors and Feller are missing. For a more detailed discussion of this, see Applicant's Amendment and Response mailed July 11, 2005 at Page 13.

Discussion of Claims 24, 25, and 28

Each of claims 24 and 25 depend, directly or indirectly, on claim 23. Claim 28 recites a machine-readable medium including instructions that cause a machine to perform the method recited in claim 23. Applicant submits that the claimed "periodically sampling set-values for ones of the candidate reuse regions to produce a probability of occurrence of top set-values, wherein each of the set-values includes values of input registers for one of the candidate reuse regions; and basing the selection of the reuse regions on the probability of occurrence of the top set-values" is not taught or suggested by the combination of Connors, Feller, and Keller. For a

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more detailed discussion of this, see Applicant's Amendment and Response mailed July 11, 2005 at Page 13.

Discussion of Claims 40, 43, 44 and 46

Claims 40, 43, 44, and 46 each depend, directly or indirectly, on one of claims 3, 9, or 39. For at least the reasons noted above, Applicant submits that the combination of Connors and Feller does not teach or suggest each and every element of claims 40, 43, 44, and 46. Applicant further submits that the Office Action does not point to any passage in Keller that teaches or suggests what Connors and Feller are lacking.

CLAIM 41 WAS REJECTED UNDER 35 USC § 103(A) AS BEING UNPATENTABLE OVER CONNORS, FELLER, KELLER, AND "DICTIONARY OF COMPUTING"

Applicants submit that the combination of Connors, Feller, Keller, and *"Dictionary of Computing"* does not teach or suggest each and every element of claim 41. For a more detailed discussion of this, see Applicant's Amendment and Response mailed July 11, 2005 at Page 15.

CLAIM 13 WAS ALSO REJECTED UNDER 35 USC § 103(A) AS BEING UNPATENTABLE OVER CONNORS, FELLER, KELLER, CHANG, AND APA

Applicants submit that the claimed "combining the register values into a single set-value; determining an occurrence frequency of the single set-value; and storing the occurrence frequency and the single set-value in a data structure" is not taught or suggested by the combination of Connors, Feller, Keller, Chang, and APA. For a more detailed discussion of this, see Applicant's Amendment and Response mailed July 11, 2005 at Page 16.

CLAIMS 18 AND 19 WERE ALSO REJECTED UNDER 35 USC § 103(A) AS BEING UNPATENTABLE OVER CALDER IN VIEW OF CHANG

Applicants submit that the claimed "instrumenting the software program to, when executed, sample a location-value every S occurrences of the candidate load instruction, wherein S is an integer greater than 1" is not taught or suggested by the combination of Calder and Chang. For a more detailed discussion of this, see Applicant's Amendment and Response mailed July 11, 2005 at Page 16.

CLAIM 45 WAS ALSO REJECTED UNDER 35 USC § 103(A) AS BEING UNPATENTABLE OVER CONNORS, FELLER, KELLER, AND "DICTIONARY OF COMPUTING"

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Claim 45 indirectly depends on claim 3. As noted above, the combination of Connors and Feller does not teach or suggest the claimed "tracking, during the execution, a number of times a set-value is encountered" and "selecting, based on the tracking, the candidate reuse region as a computation reuse region". The Office Action does not point to any passage in Keller or *"Dictionary of Computing"* that teaches or suggests the cited claim features. As such, Applicant submits that the combination of Connors, Feller, Keller, and *"Dictionary of Computing"* does not teach or suggest each and every element of claim 45.

CONCLUSION

Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney, Andrew DeLizio (281-213-8980), or Applicant's below-named representative to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

YOUFENG WU

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Date _Jan. 6, 2006_   By _Ann M. McCrackin_
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CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on this ___6th___ day of January, 2006.

Amy Moriarty
Name

Signature